# Renyu (Philip) Zhang

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CONTACT Information New York University Shanghai

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Pudong, Shanghai, China, 200122

EDUCATION

Washington University in St. Louis, Olin Business School

St. Louis, MO

Ph.D. Operations Management

05/2016

- Thesis: Dynamic Pricing and Inventory Management: Theory and Applications
- Advisors: Nan Yang, Fuqiang Zhang

Peking University, School of Mathematical Sciences

Beijing, China

B.S. Mathematics

07/2011

ACADEMIC POSITION New York University Shanghai

Shanghai, China

Assistant Professor of Operations Management

09/2016-

NYU Global Network Assistant Professor

07/2017-

New York University, Stern School of Business

New York, NY

Visiting Assistant Professor of Operations Management

06/2017-

NON-ACADEMIC POSITION

Kwai

Economist & Tech Lead

Beijing, China

12/2018-

Research

Interests

Methodologies

Reinforcement learning; optimization; randomized experiment; matching; game theory; mechanism design; econometrics and causal inference.

### Applications

Online platforms and marketplaces; sharing economy; social networks; recommender systems; advertising; revenue management and pricing; inventory and supply chain management.

#### **Publications**

- 1. Dynamic Pricing and Inventory Management under Inventory-Dependent Demand, *Operations Research*, **62**(5), 2014, 1077-1094 (with Nan Yang).
- 2. Dynamic Pricing and Inventory Management under Fluctuating Procurement Costs, *Manufacturing & Service Operations Management*, **17**(3), 2015, 321-334 (with Guang Xiao and Nan Yang).
- 3. Dynamic Supply Risk Management with Signal-Based Forecast Multi-Sourcing, and Discretionary Selling, *Production and Operations Management*, **26**(7), 2017, 1399-1415 (with Long Gao, Nan Yang, and Ting Luo).
- 4. Trade-in Remanufacturing, Customer Purchasing Behavior, and Government Policy Manufacturing & Service Operations Management, **20**(4), 2018, 601-616 (with Fuqiang Zhang).
  - Finalist award in the POMS College of Supply Chain Management 2015 Best Student Paper Competition

### Papers under Review

- 5. Competition and Coopetition for Two-sided Platforms (with Maxime Cohen).
  - Honorable Mention in the INFORMS Service Science Best Cluster Paper Award
- 6. Data Aggregation and Demand Prediction (with Maxime Cohen and Kevin Jiao).
  - Finalist in the INFORMS Data Mining Section Best Paper Award
- 7. Cold Start on Online Advertising Platforms: Data-Driven Algorithms and Field Experiments (with Zikun Ye, Dennis Zhang, Heng Zhang, Xin Chen, and Zhiwei Xu).
- 8. Social Nudges Boost Productivity on Online Platforms: Evidence from Field Experiments (with Zhiyu Zeng, Hengchen Dai, Dennis Zhang, Max Shen, Zhiwei Xu, and Heng Zhang).
- 9. Personalized Sales Targets with Customer Choices (with Xiaolong Li, Ying Rong, and Huan Zheng).
- 10. Dynamic Pricing and Inventory Management in the Presence of Online Reviews (with Nan Yang).
- 11. Dynamic Competition under Market Size Dynamics: Balancing the Exploitation-Induction Tradeoff (with Nan Yang).
- 12. Competition on Inventory Availability and Price (with Junfei Lei, Yugang Yu, and Fuqiang Zhang).
- 13. Carpool Services for Ride-sharing Platforms: Price and Welfare Implications (with Xuan Wang).
- 14. Comparative Statics Analysis of Inventory Management Models with Dynamic Pricing (with Nan Yang).

# Works in Progress

15. Recommender Systems on Platforms (with Xuan Wang and Dennis J. Zhang).

| Invited Seminars         | Tsinghua University, School of Economics and Management                                       | 11/2020           |
|--------------------------|---|-------------------|
| III VII DD DDIIII VIII D | Chinese University of Hong Kong Shenzhen, School of Data Science                              | 11/2020 $11/2020$ |
|                          |   | 10/2020           |
|                          | Sun Yat-sen University, Lingnan College   | ,                 |
|                          | Fudan University, School of Management  | 10/2020           |
|                          | Sichuan University, School of Business  | 10/2020           |
|                          | National University of Singapore, Institute of Operations Research and Analytics [V $10/2020$ | ideo link]        |
|                          | Shanghai Jiaotong University, Antai College of Economics and Management                       | 09/2020           |
|                          | New York University, Stern School of Business   | 09/2020           |
|                          | Club Bear Online Seminar [Video link]   | 07/2020           |
|                          | University of Illinois at Chicago, College of Business Administration                         | 10/2019           |
|                          | Peking University, Guanghua School of Management  | 12/2018           |
|                          | Sun Yat-sen University, Lingnan College   | 12/2018           |
|                          | John Hopkins University, Carey Business School  | 11/2018           |
|                          | New York University, Stern School of Business   | 11/2018           |
|                          | Chinese University of Hong Kong, CUHK Business School   | 01/2018           |
|                          | Sichuan University, School of Business  | 12/2017           |
|                          | Washington University in St. Louis, Olin Business School                                      | 10/2017           |

Hong Kong University of Science and Technology, HKUST Business School

Hong Kong Polytechnique University, Faculty of Business

City University of Hong Kong, College of Business

New York University, Stern School of Business

08/2017

08/2017

08/2017 06/2017

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|------------------|--|-------------------|
|                  | Singapore Management University, Lee Kong Chian School of Business               | 04/2017           |
|                  | National University of Singapore, NUS Business School                            | 04/2017           |
|                  | University of Science and Technology of China, School of Management              | 03/2017           |
|                  | Southeast University, School of Economics and Management                         | 12/2016           |
|                  | Tsinghua University, School of Economics and Management                          | 12/2016           |
|                  | Shanghai Jiaotong University, Antai School of Economics and Management           | 12/2016           |
|                  | University of Toronto, Rotman School of Management                               | 11/2016           |
|                  | Nanjing University, School of Management and Engineering                         | 09/2016           |
|                  | Southwest University of Finance and Economics, School of Business Administration | 07/2016           |
|                  | Southwest Jiaotong University, School of Economics and Management                | 07/2016           |
|                  | Shanghai University of Finance and Economics, School of Business Administration  | 02/2016           |
|                  | New York University Shanghai   | 02/2016           |
|                  | University of Texas at Dallas, Jindal School of Management                       | 01/2016           |
|                  | New York University, Stern School of Business                                    | 01/2016           |
|                  | Chinese University of Hong Kong, SEEM Department                                 | 01/2016           |
|                  | Hong Kong University of Science and Technology, HKUST Business School            | 01/2016           |
|                  | Hong Kong University of Science and Technology, IELM Department                  | 01/2016           |
|                  | Hong Kong Polytechnique University, Faculty of Business                          | 01/2016           |
|                  | City University of Hong Kong, College of Business                                | 01/2016           |
| Conference Talks | INFORMS Annual Meeting 2020  | 11/2020           |
|                  | National Science Foundation of China, PI Meeting                                 | 10/2020           |
|                  | INFORMS Annual Meeting 2019  | 10/2019           |
|                  | Data-Driven and Innovative Operations Workshop,                                  | 06/2019           |
|                  | POMS-HK Conference 2019  | 01/2019           |
|                  | Young Scholars' Forum on Management Science 2019                                 | 01/2019           |
|                  | INFORMS Annual Meeting 2018  | 11/2018           |
|                  | Operations Management under "Internet+" Environment                              | 08/2018           |
|                  | MSOM Conference 2018   | 07/2018           |
|                  | Revenue Management and Pricing Annual Conference 2018                            | 06/2018           |
|                  | Revenue Management Workshop  | 05/2018           |
|                  | POMS Conference 2018   | 05/2018           |
|                  | POMS-HK Conference 2018  | 01/2018           |
|                  | Young Scholars' Forum on Management Science 2017                                 | 12/2017           |
|                  | INFORMS Annual Meeting 2017  | 10/2017           |
|                  | MSOM Conference 2017   | 06/2017           |
|                  | POMS-HK Conference 2017  | 01/2017           |
|                  | INFORMS Annual Meeting 2016  | 11/2016           |
|                  | CSAMSE Annual Conference 2016  | 07/2016           |
|                  | Revenue Management and Pricing Annual Conference 2016                            | 06/2016           |
|                  | POMS Annual Meeting 2016   | 05/2016 $05/2016$ |
|                  | Decision Science Institute Annual Conference 2015                                | 11/2015           |
|                  | INFORMS Annual Meeting 2015  | 11/2015 $11/2015$ |
|                  | MSOM Annual Conference 2015  | •                 |
|                  |  | 06/2015           |
|                  | POMS Annual Meeting 2015   | 05/2015           |

| INFORMS Annual Meeting 2014 | 11/2014 |
|-----------------------------|---------|
| MSOM Annual Conference 2014 | 06/2014 |
| INFORMS Annual Meeting 2013 | 10/2013 |
| INFORMS Annual Meeting 2012 | 10/2012 |
|                             |         |

# AND GRANTS

HONORS, AWARDS, 1. Finalist, INFORMS Data Mining Section Best Paper Award.

10/2019

2. MSOM Meritorious Service Award 2018, 2019

04/2020

- 3. Shanghai Eastern Scholar, Young Scientist Program QD2018053, PI, RMB 200,000/Year.01/2019-12/2021
- 4. National Science Foundation of China, Young Scientist Program 71802133, PI, RMB 180,000. 01/2019-12/2021
- 5. Honorable Mention, INFORMS Service Science Best Cluster Paper Award. 10/2017
- 6. Shanghai Pujiang Talent Program 17PJC074, PI, RMB 100,000.

09/2017-08/2019

- 7. Finalist Award, POMS College of Supply Chain Management Best Student Paper Competition. 05/2015
- 8. First Prize Award, Chinese Mathematics Olympiad

10/2006

# Teaching EXPERIENCES

#### New York University Shanghai

#### Instructor

| • Business Analytics  | Spring 2021 |
|---|-------------|
| • Machine Learning for Business (Rating: 4.8/5)               | Fall 2020   |
| • Business Analytics (Rating: 4.2/5, 4.8/5)                   | Spring 2019 |
| • Operations Management (Rating: 4.6/5)                       | Spring 2019 |
| • Business Analytics (Rating: 4.4/5, 4.7/5)                   | Spring 2018 |
| • Competitive Advantage from Operations (Rating: 3.8/5)       | Fall 2017   |
| $\bullet$ Competitive Advantage from Operations (Rating: 4/5) | Spring 2017 |
| • Competitive Advantage from Operations (Rating: 4.6/5)       | Fall 2016   |

#### **Business Honors Thesis Advisor**

• Ziheng Wang (2020), Yiyi Zhang (2018), Yujia Ni (2018).

## Kwai

## **Internal Instructor**

| • Data Driven Optimization | 05/2020    |
|----------------------------|------------|
| Operations Analytics       | 01-05/2019 |

## Washington University in St. Louis, Olin Business School

## Teaching Assistant

• Operations Management; Advanced Operations Strategy; Market Competition and Value Appropriation; Operations Planning and Control.

## Professional SERVICES

#### Journal Referee

Management Science, Operations Research, Manufacturing & Service Operations Management, Marketing Science, Production and Operations Management, Transportation Research: Part B, Naval Research Logistics, European Journal of Operations Research, Omega, Journal of Management Science and Engineering, Applied Mathematical Modeling, Operational Research: An International Journal.

## Competition Judge

MSOM Student Paper Competition (2020, 2019, 2018, 2017).

POM College of Supply Chain Management Student Paper Competition (2020).

### Conference Committee and Session Chair

Session Chair:

• INFORMS 2020, INFORMS 2018, POMS 2018, POMS-HK Conference 2018, POMS-HK Conference 2017, CSAMSE Conference 2016.

Sponsorships and Exhibits Committee member:

• POMS Annual Meeting 2016.

# **Professional Organization Membership**

INFORMS, MSOM, RMP, APS, POMS.

#### **Internal Services**

| NYU Shanghai Candidate Weekend instructor.                         | 03/2018         |
|--|-----------------|
| NYU Shanghai Business Honors program thesis advisor.               | 09/2017-        |
| NYU Shanghai Operations Management Reading Group co-organizer.     | 03/2017-        |
| NYU Shanghai Housing Subcommittee member.                          | 11/2016-05/2019 |
| NYU Shanghai Business Research Seminar coordinator.                | 09/2016-08/2017 |
| NYU Shanghai Business Honors Program guest lecturer.               | 10/2016-        |
| Olin Busines School Operations Management PhD Seminar coordinator. | 01/2013-12/2013 |

CONSULTING

# **Cardinal Operations**

EXPERIENCES Parttime Scientist 09/2017-08/2018

## Boeing Center for Supply Chain Innovation, Washington University in St. Louis

Parttime consultant. 10/2013-06/2015

PERSONAL Chinese citizen, Christian, married with one child.